Malaria

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Malaria remains a major killer of young children and an enormous economic drain on developing countries. The purpose of this conference panel was to explore two major initiatives to build capacity for prevention and control of malaria.

Roll Back Malaria

Awash Teklehaimanot, acting project manager for Roll Back Malaria (RBM), described its initiative. Each year, more than 300 million clinical cases of acute malarial illness occur, mainly affecting the world's poorest populations. More than 1 million people die each year from malaria, and 90% of these deaths occur in children in sub-Saharan Africa. Malaria is also a substantial impediment to human development in poor countries. It slows economic growth in Africa by up to 1.3% each year; the short-term benefits of malaria control have been estimated at U.S. $3 to $12 billion per year. Malaria is a growing concern as antimicrobial resistance against multiple drugs becomes more widespread and malaria develops in areas previously malaria-free.

The RBM partnership, launched by World Health Organization (WHO) Director-General Grö Harlem Brundtland in October 1998, is committed to cutting the global malaria burden in half by 2010. In Africa, where most malaria occurs, the RBM partnership builds on a history of malaria control and a political commitment to eliminating the disease, which has never been higher. For example, the African Heads of State Summit to Roll Back Malaria, held in Abuja, Nigeria, on April 25, 2000, marked the first meeting of African political leaders to discuss the human and economic consequences of malaria on their continent. At the summit, heads of several development agencies pledged $750 million in new money and discussed concrete action to be taken over the next decade.

The core elements of RBM strategy include 1) ensuring rapid diagnosis and early treatment within or near the home; 2) making insecticide-treated mosquito nets (ITNs) available and increasing access to other vector control measures, such as environmental management to control mosquitoes; 3) making pregnancy safer through preventive intermittent malaria treatment for pregnant women; 4) improving epidemic preparedness through improved surveillance and appropriate rapid response; and 5) supporting focused research to develop new medicines, vaccines, and insecticides.

To implement these core interventions on a large-scale, the RBM partnership recognizes the need to 1) strengthen the capacity of health systems and services; 2) work with and through other sectors such as education, public works, women's development, agriculture, and local government; 3) involve other groups, such as those in the private sector, and 4) sponsor focused applied research and development of effective tools and approaches. In addition, technical support networks comprised of experts with practical experience and from various institutions have been established to provide a link between universities, disease control operations, and international experts.

Some recent promising developments include ITNs with long-lasting insecticide; initiatives to create commercially sustainable markets for ITNs; more effective and less expensive antimalarial drug combinations; concerted efforts to reduce tariffs and taxes on antimalarial commodities, such as drugs and nets; and partnerships with other international health programs, such as the Integrated Management of Childhood Illness program, to both ensure more efficient health systems that address all diseases of poverty and to improve medical treatment of children. For further information about RBM, please visit their website at www.rbm.who.int.

Multilateral Initiative on Malaria

Gerald Keusch described the Multilateral Initiative on Malaria (MIM) as an alliance of organizations and individuals working together to increase malaria research in Africa and to facilitate global collaboration, coordination, and capacity-building. MIM's roots can be traced back to 1995 when the National Institutes of Health (NIH) organized an initial planning meeting. This was followed in 1997 by an international conference in Dakar, Senegal, which was notable for the prominent role played by African malaria research scientists. After follow-up meetings in The Hague and in London, MIM was officially launched in late 1997, with the first secretariat housed at the Wellcome Trust. In 1999 the 1st International MIM Conference was held in Durban, South Africa, to bring the malaria research and control communities together. MIM's secretariat is intended to rotate among member organizations; since June 1999, it has been housed at the Fogarty International Center of NIH.

MIM has several objectives: 1) to raise international public awareness of the problem of malaria; 2) to promote global communication and cooperation on malaria; 3) to develop sustainable malaria research capacity in Africa; and 4) to ensure that research findings are applied to malaria treatment and control.

To date, MIM has had several notable accomplishments. With funding from NIH, the World Bank, the Rockefeller Foundation, WHO, and the governments of Norway, France, and Japan, MIM and WHO's Tropical Disease Research (TDR) program formed a MIM-TDR Research and Capacity-Building Grants Program. To date, 20 grants have been given through which $6 million has been distributed. The grants embody several of the guiding principles of MIM, such as an

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emphasis on partnerships, decision-making by African scientists, and a strong scientific basis for the funded research. To support a variety of research programs, MIM has also developed the Malaria Research and Reference Reagent Resource Center, which provides high quality reagents and materials to investigators who are, or wish to be, involved in malaria research. NIH's National Library of Medicine has taken responsibility for enhancing the capacity of African scientists to do research by establishing and supporting access to communications and information resources. A number of research networks are online using very small aperture telecommunications (VSAT) technology for Internet access. This allows for shared databases, electronic mail and discussion groups, access to published literature, and use of remote sensing technologies. Information about the progress of MIM is shared through meetings, a newsletter, and on the internet at http://mim.nih.gov

Future goals of MIM include stabilizing funding for the MIM-TDR grant program, developing new partnerships, and creating new training opportunities, such as training on research management. Scientific research on *Plasmodium vivax* and on malaria-related anemia is being conducted. Interactions with RBM are well-established and coordinated. The 2nd International MIM Conference is scheduled for 2002 in Tanzania.